399-2-24 (C6208)
Log Data Report

Borehole Information:

Borehole:	399-2-24 (C6208)		Site:	300-FF-5	
Coordinates (WA St Plane)		GWL[1] (ft):	26.3	GWL Date:	06/03/08
North (m)	East (m)	Drill Date	TOC[2] Elevation	Total Depth (ft)	Type
116063.3659	594280.564	06/02/08	Unknown	67.5	Sonic

Casing Information:

Casing Type	Stickup (ft)	Outer Diameter (in.)	Inside Diameter (in.)	Thickness (in.)	Top (ft)	Bottom (ft)
Threaded Steel	2.5	7 5/8	6 7/8	3/8	-2.5	63.2

Borehole Notes:

Well site geologist reported depth to bottom, depth to water and depth of casing. Logger measured the casing diameter using a steel tape and rounding to the nearest 1/16-in. The zero reference is the ground surface.

Logging Equipment Information:

Logging System:	Gamma 1 N		Type: / Serial No.:	60% HPGe SGLS / 45TP22010A
Effective Calibration Date:	03/28/08	Calibration Reference:	HGLP-CC-031	
		Logging Procedure:	HGLP-MAN-002, Rev. 0	

Logging System:	Gamma 1 M		Type: / Serial No.:	NMLS / H340207279
Effective Calibration Date:	05/06/08	Calibration Reference:	HGLP-CC-032	
		Logging Procedure:	HGLP-MAN-002, Rev. 0	

Spectral Gamma Logging System (SGLS) Log Run Information:

Log Run	1	2	3 Repeat
Date	06/03/08	06/04/08	06/04/08
Logging Engineer	McClellan	McClellan	McClellan
Start Depth (ft)	0.0	50.0	64.0
Finish Depth (ft)	51.0	65.0	57.5
Count Time (sec)	200	200	200
Live/Real	R	R	R
Shield (Y/N)	N	N	N
MSA Interval (ft)	0.5	0.5	0.5
Log Speed (ft/min)	N/A	N/A	N/A
Pre-Verification	AN079CAB	AN080CAB	AN080CAB
Start File	AN079000	AN080000	AN080031
Finish File	AN079102	AN080030	AN080044
Post-Verification	AN079CAA	AN080CAA	AN080CAA
Depth Return Error (in.)	0	N/A	0
Comments	No fine gain adjustment made.	No fine gain adjustment made.	No fine gain adjustment made. Repeat section

Neutron Moisture Logging System (NMLS) Log Run Information:

Log Run	4	5 Repeat
Date	06/04/08	06/04/08
Logging Engineer	McClellan	McClellan
Start Depth (ft)	0.0	26.25
Finish Depth (ft)	26.5	20.0
Count Time (sec)	15	15
Live/Real	R	R
Shield (Y/N)	N	N
MSA Interval (ft)	0.25	0.25
Log Speed (ft/min)	N/A	N/A
Pre-Verification	AM006CAB	AM006CAB
Start File	AM006000	AM006107
Finish File	AM006106	AM006132
Post-Verification	AM006CAA	AM006CAA
Depth Return Error (in.)	N/A	1.5 high
Comments	None	Repeat section.

Logging Operation Notes:

Data were collected using Gamma 1, HO 68B-3574. Spectral log data (SGLS) pre- and post-survey verification measurements were acquired in the Amersham KUTh-118 field verifier. Neutron moisture pre- and post-survey verification measurements were acquired in the AmBe standard. Maximum logging depth was 65.0 ft. before the sonde un-weighted. A centralizer was installed on the sondes.

Analysis Notes:

Analyst:	LEGLER	Date:	6/24/08	Reference:	GJO-HGLP 1.6.3, Rev. 0

The pre- and post-survey verification spectra met the acceptance criteria for the established systems. A correction for a 3/8-in. thick casing was applied to SGLS from ground surface to 63.2 ft, leaving 1.8 ft of open borehole uncorrected. A water correction was also applied from 26.3 ft to total logged depth.

SGLS spectra were processed in batch mode using APTEC SUPERVISOR to identify individual energy peaks and determine count rates. Concentrations were calculated with an EXCEL worksheet template identified as G1NMar08.xls using efficiency functions and corrections for casing, dead time, and water as determined by annual calibrations.

Moisture data are presented in counts per second because no calibration data exists for a 6 7/8-in. inner diameter casing.

Results and Interpretations:

Cs-137, Co-60, U-238 (Pa-234m), and U-235 were detected at several isolated depths in this borehole. Co-60 was detected at 0.12 pCi/g at 6.5 ft. Inspection of the individual spectra for the other isotopes at the various depths indicates these detections are statistical fluctuations and are not valid.

A fine grain sediment layer can be found at around 23 ft, as seen by an increase in the total gamma and natural U-238 (1764keV) plots.

The KUT and Moisture plots indicate good repeat ability.

Depth to groundwater is reported to be 33 ft in the Logging Request Tracking Sheet (no date provided). Log data collected on 6/03/08 and 6/04/08 indicate depth to ground water is approximately 26.3 ft. The depth to groundwater appears to fluctuate with changes in the river level.

List of Log Plots:

Depth Reference is ground surface

Manmade Radionuclides
Natural Gamma Logs
Combination Plot
Total Gamma & Dead Time
Total Gamma & Moisture
Repeat Section of Natural Gamma Logs
Moisture Repeat Section

[1] GWL – groundwater level
[2] TOC – top of casing

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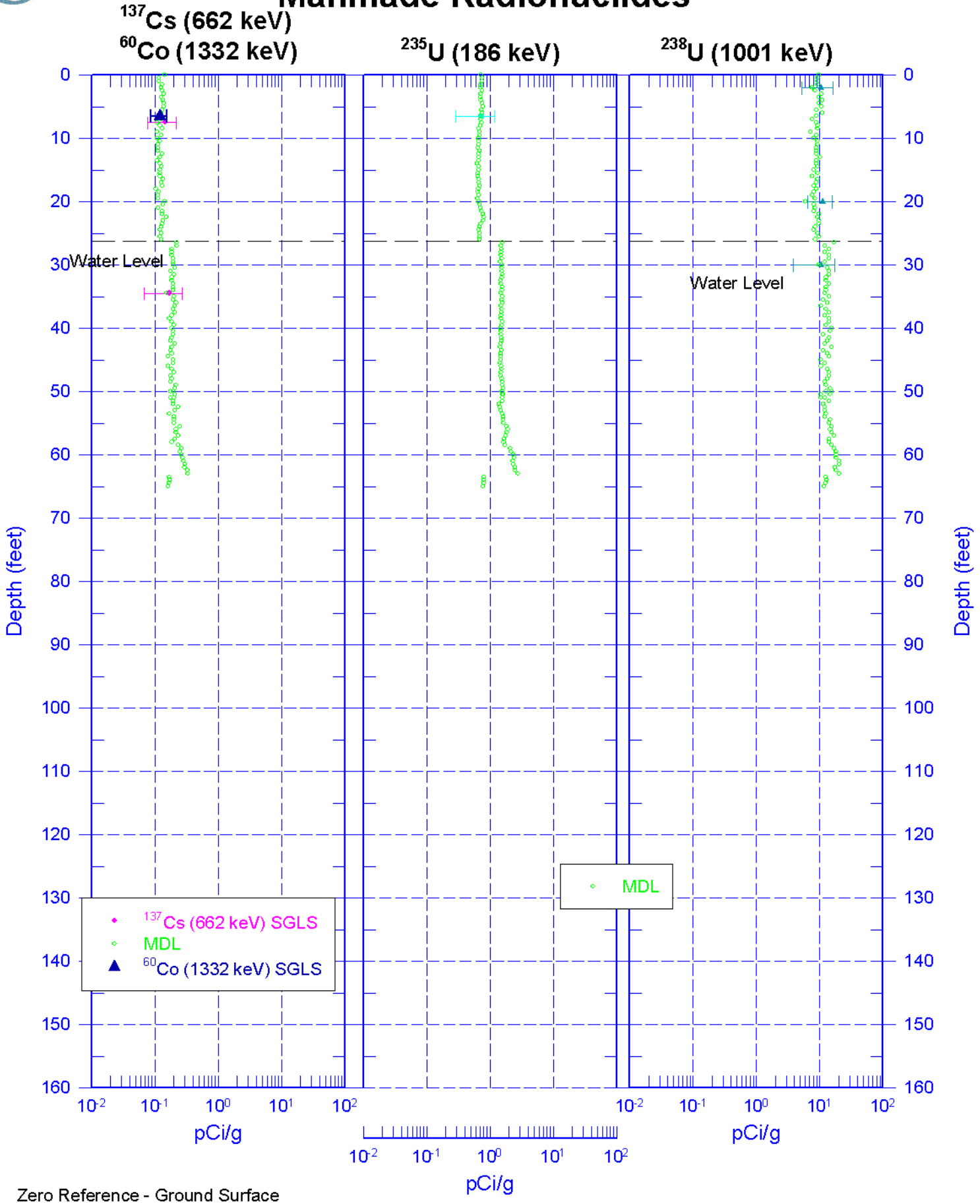
399-2-24 (C6208)
Manmade Radionuclides



Zero Reference - Ground Surface

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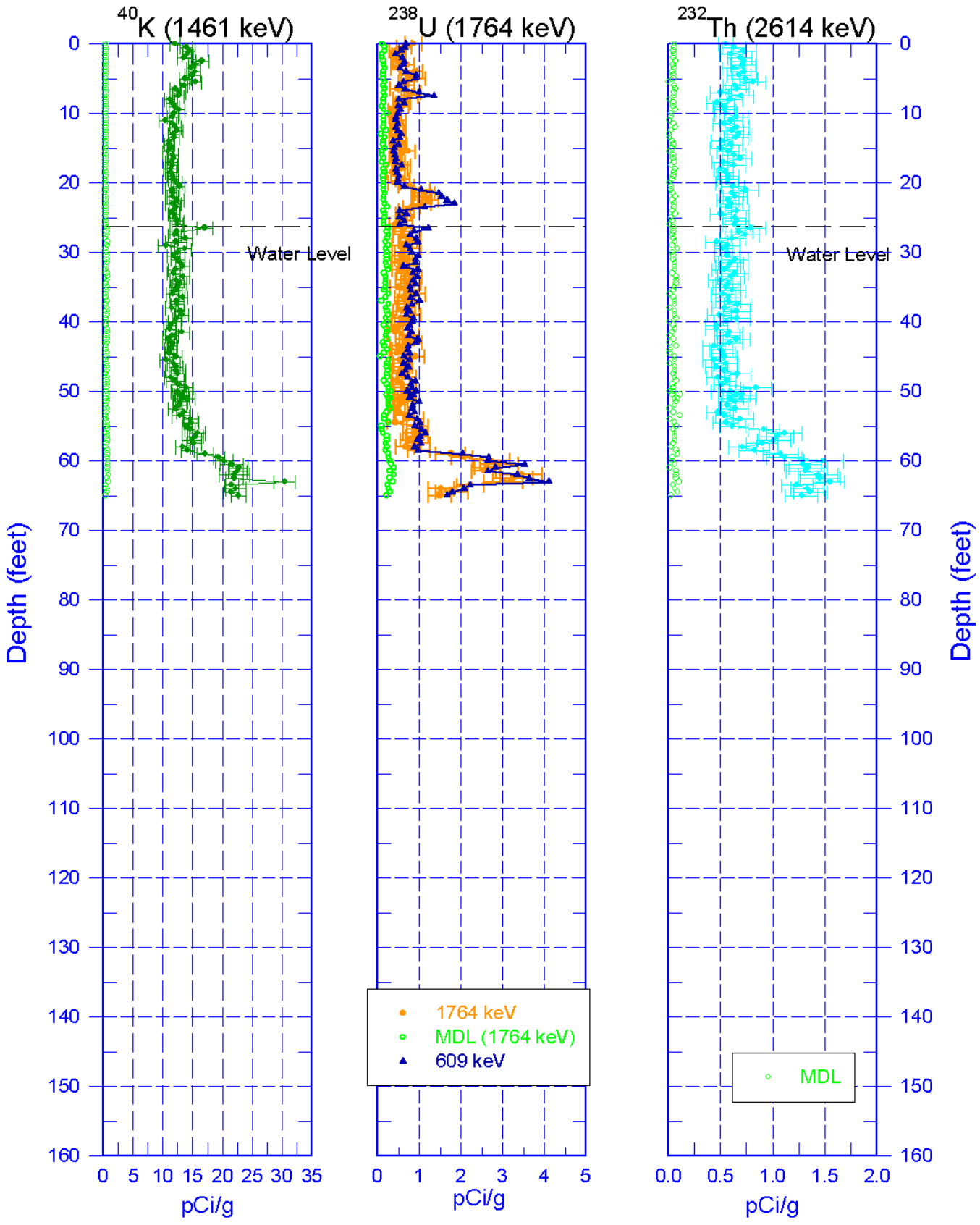
399-2-24 (C6208)
Natural Gamma Logs



Zero Reference - Ground Surface

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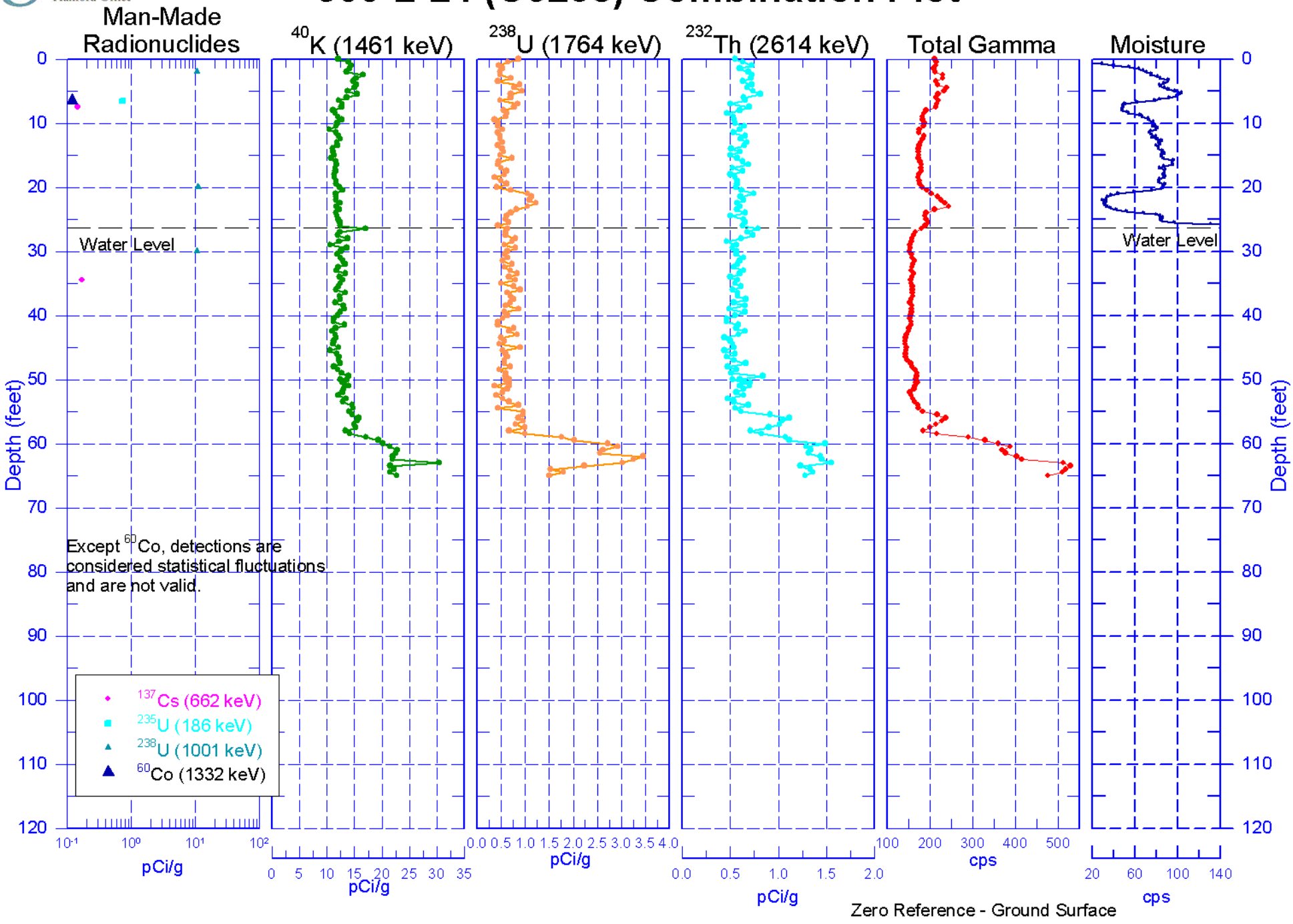
399-2-24 (C6208) Combination Plot



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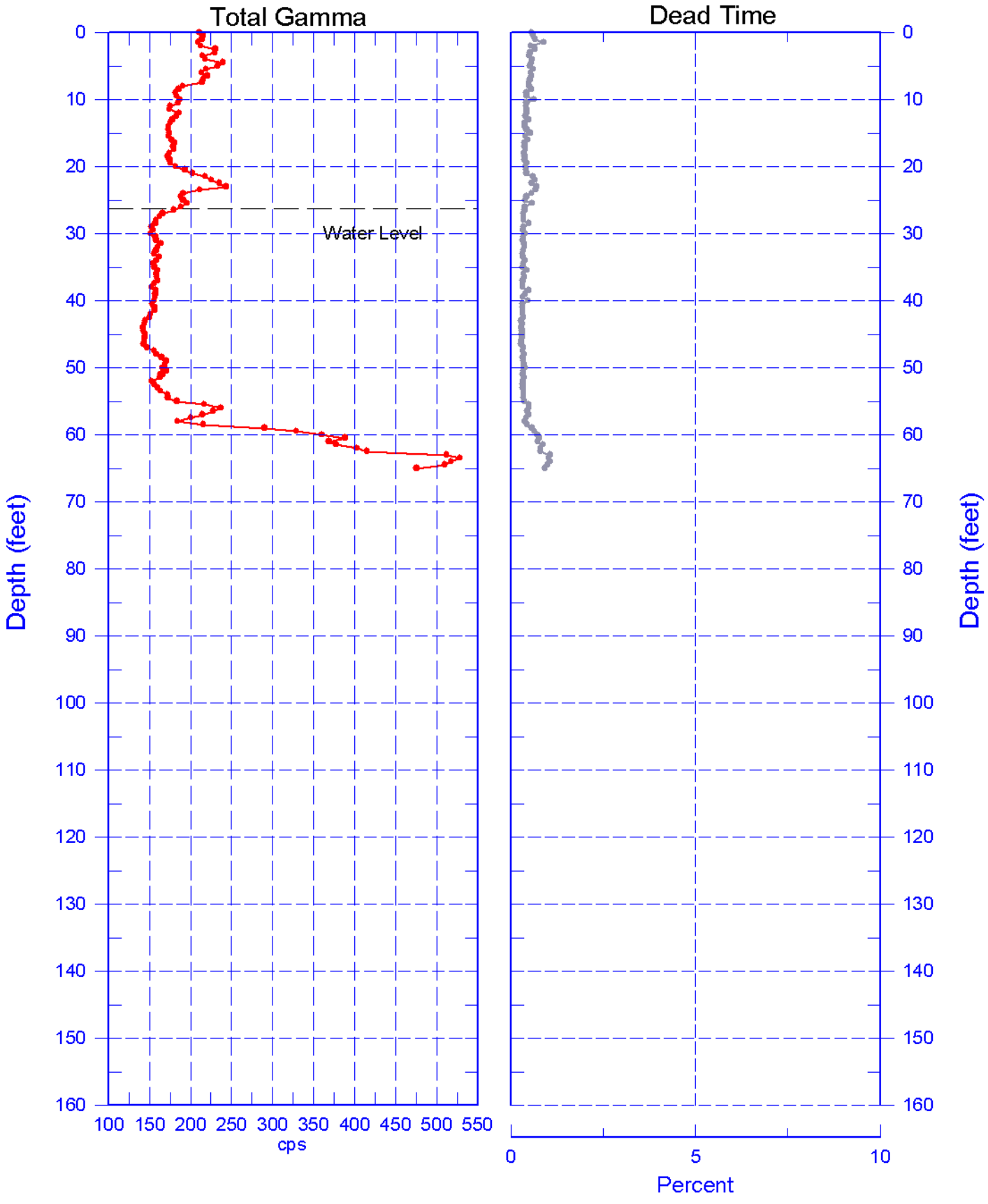
399-2-24 (C6208)
Total Gamma & Dead Time



Reference - Ground Surface

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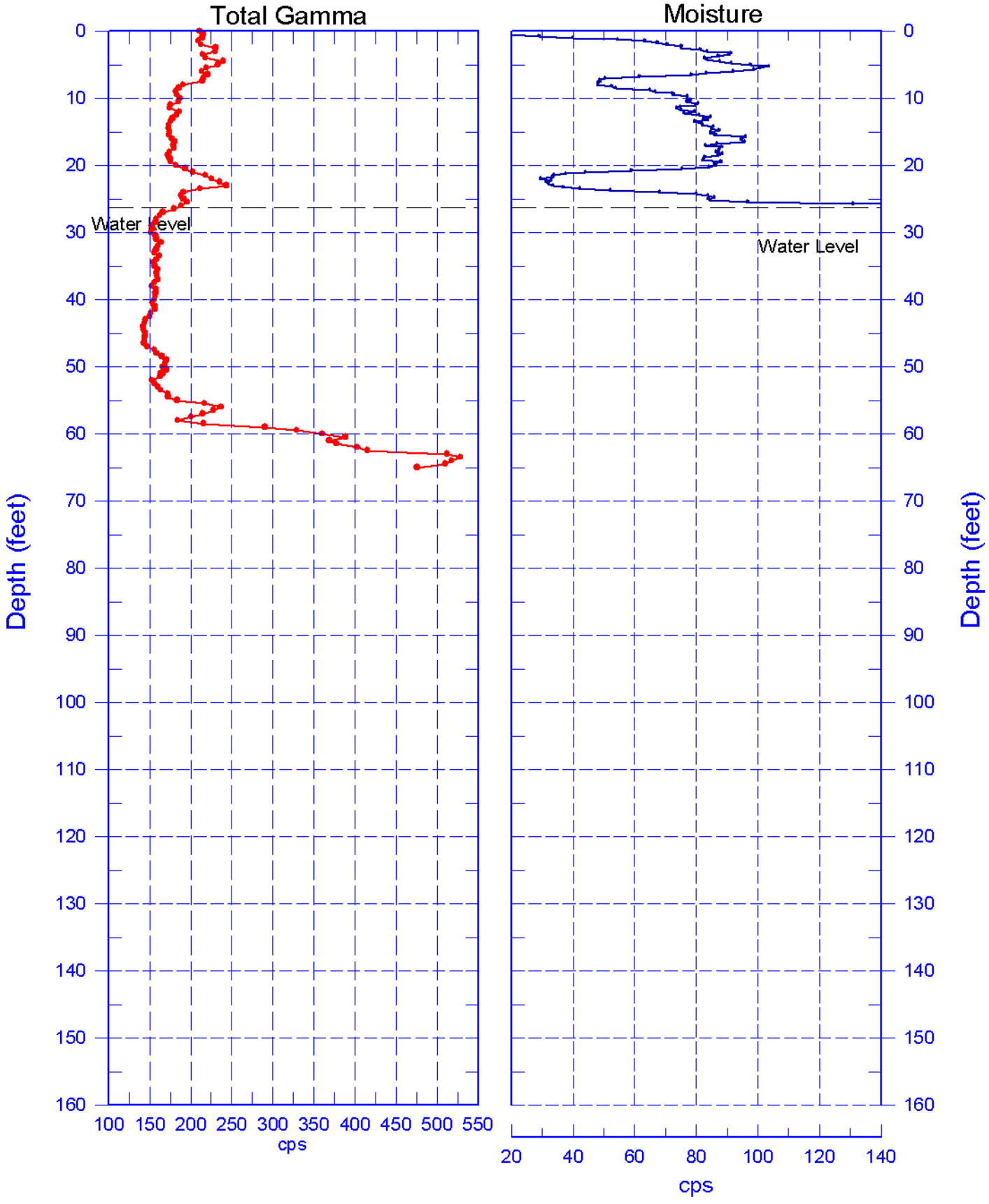
399-2-24 (C6208)
Total Gamma & Moisture



Reference - Ground Surface

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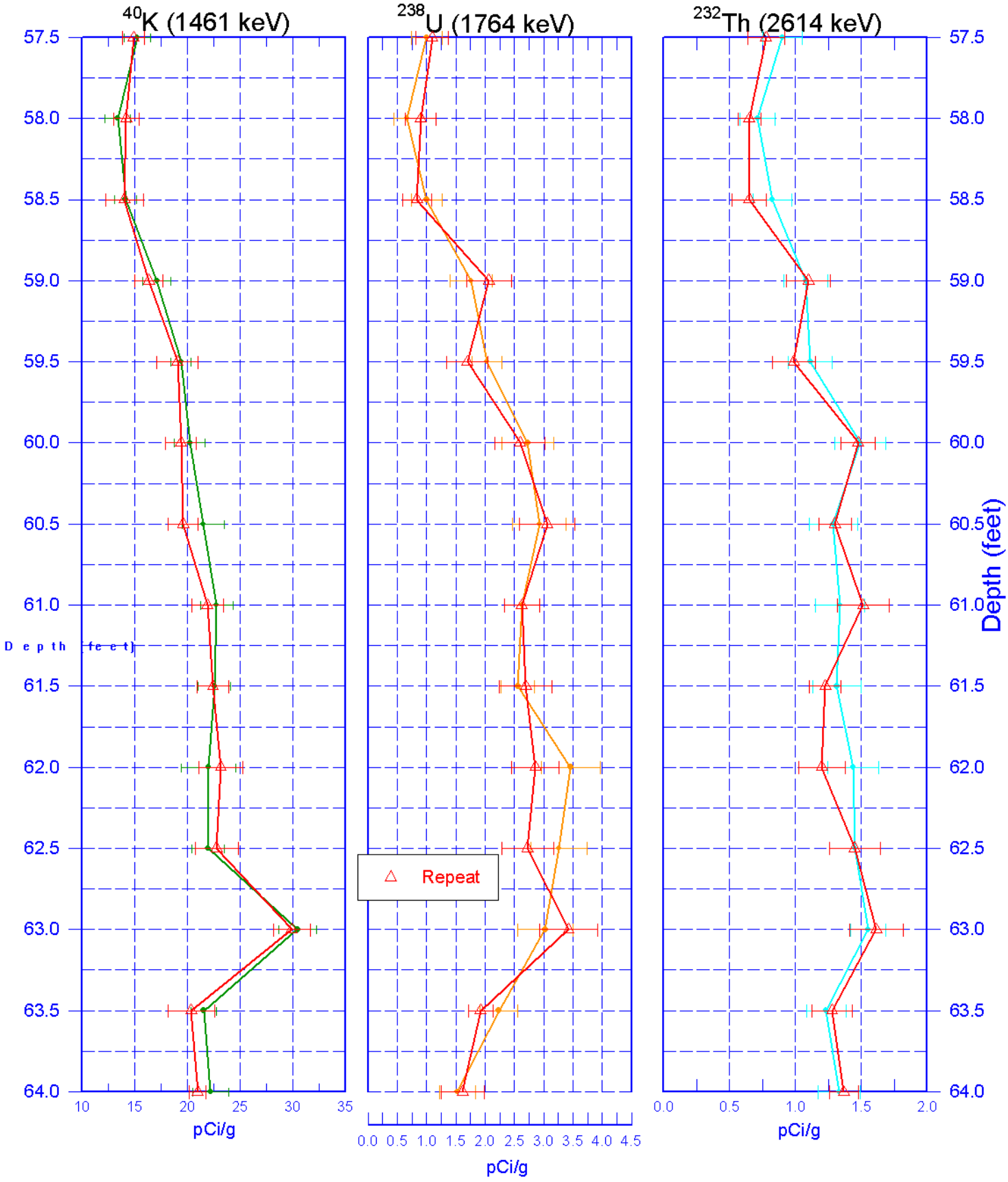
399-2-24 (C6208)

Repeat Section of Natural Gamma Logs



Zero Reference - Ground Surface

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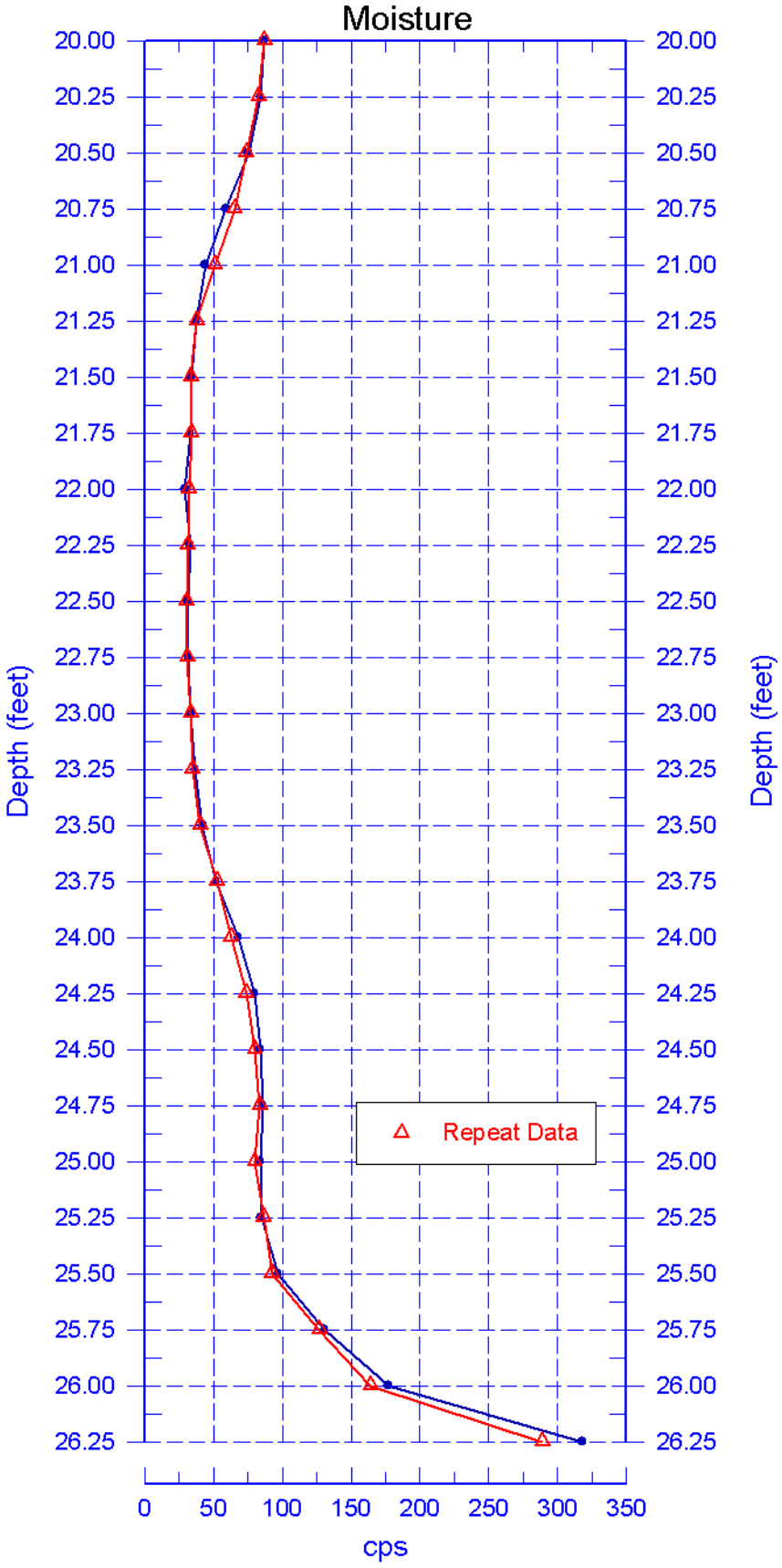
399-2-24 (C6208)
Moisture Repeat Section



Reference - Ground Surface